

REC'D 06 JAN 2006

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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

04 JAN 2006

Applicant's or agent's file reference

SLRE 103540/

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US04/26700

International filing date (day/month/year)

18 August 2004 (18.08.2004)

Priority date (day/month/year)

22 August 2003 (22.08.2003)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): A01N 31/08, 37/10, 43/38, 57/14 and US Cl.: 504/101, 194, 284, 317, 336, 354; 514/130, 266, 419, 450, 543, 557, 570, 573, 617, 732, 762

Applicant

STOLLER ENTERPRISES, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Date of completion of this opinion

22 November 2005 (22.11.2005)

Authorized officer

S. Mark Glaros

Telephone No. 571-272-1600

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US04/26700

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No. 15/111
PCT/US04/26790

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>1-70</u>	YES
	Claims <u>NONE</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-70</u>	NO
Industrial applicability (IA)	Claims <u>1-70</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Claims 1-70 lack an inventive step under PCT Article 33(3) as being obvious over Frederick (US 4,675,327) in view of Wei (CN 1262037A).

Fredrick teaches antimicrobial embalming fluids comprising the synergistic combination of a disinfectant and a plant hormone or plant growth regulator (columns 2-3). The auxinic hormone NAA was tested in Example VI at a concentration of 1.0 mM resulting in a zone of inhibition of 10.0 mm, thus indicating that the antimicrobial property of NAA was known.

Wei teaches that plant auxin was a known antibacterial and antiviral agent.

Thus it would have been *prima facie* obvious to the ordinary artisan at the time the invention was made to have used plant hormones such as auxins as antimicrobial agents because the prior art teaches that such activity was known for this class of agents. Since application for antimicrobial purposes was known, at concentrations below the plant hormone activity threshold, it would be apparent that other effects of such applications, including inhibition of insect infestation, would necessarily follow from such applications. Further, absent a showing of criticality, it would be obvious to apply the compositions to any plant or plant part, including seed.

Claims 1-70 meet the criteria set out in PCT Article 33(4), and thus possess industrial applicability because the subject matter claimed can be made or used in industry.